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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/696,104

10/29/2003

Michael Pollock

90040-104774

6606

44200 7590 01/11/2007  
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EXAMINER

THOMAS, LUCY M

ART UNIT

PAPER NUMBER

2836

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/696,104

Applicant(s)

POLLOCK ET AL.

Examiner

Lucy Thomas

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's request for reconsideration of the finality of the rejection of the last office action is persuasive and, therefore, the finality of that action is withdrawn.

#### ***Claim Objections***

2. Claim 17 is objected to because of the following informalities: Recitation of "the method according to Claim 1" is incorrect as Claim 1 is not a method claim. It appears that the Applicant meant Claim 17 depend on Claim 12 which is a method claim. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 6, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boksjo et al. (US 3,487,261) in view of Goodman (US 6,088,210). Regarding Claim 1, Boksjo discloses an apparatus for over voltage protection of a device (see Figure 4) comprising a diode 15 connected across terminals of the device such that when the device is in normal operation, the diode is reverse biased; a spark gap 14 in series with the diode; and a housing enclosing the spark gap, the housing filled with inert gas (Column 2, lines 1-10, Column 4, lines 1-4). Boksjo's apparatus differs from the invention in that the device protected is a thyristor, not an energized inductive device. Goodman teaches that it is known in the art to use a spark gap device

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for protecting an energized inductive device, an industrial electromagnet from the effects of dissipating stored magnetic energy when supply voltage to the electromagnet is removed while the electromagnet is energized (Column 2, lines 12-14). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Boksjo's apparatus and to use as a magnet protector as taught by Goodman to safely dissipate the stored magnetic charge in case of an accidental disconnect of an energized magnet (see Goodman, Column 2, lines 5-14).

Regarding Claim 6, Goodman discloses the apparatus wherein the inductive device is an electromagnet. Regarding method claims 12 and 17, one would necessarily perform the recited method steps in the assembly of the apparatus rejected above.

5. Claim 2-3, 7-8, 13-14, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boksjo et al. (US 3,487,261) in view of Goodman (US 6,088,210) and Dibble et al. (US 6,070,568). Regarding Claims 2 and 7, Boksjo does not disclose a resistance in series with the diode and the spark gap. Dibble discloses a spark gap circuit comprising a resistance R1 in series with a diode D1 and a spark gap 13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Boksjo and Goodman and to provide a resistance as taught by Dibble, to provide a voltage dividing element to reduce the amount of over voltage across the spark gap device. Regarding Claims 3 and 8, Dibble discloses the resistance comprises at least one resistor R1.

Regarding method claims 12-14, 17-19, one would necessarily perform the recited method steps in the assembly of the apparatus rejected above.

6. Claims 4-5, 11, 15-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boksjo et al. (US 3,487,261) in view of Goodman (US 6,088,210) and Czerlinski (US 4,520,249). Boksjo fails to disclose a charge valve as recited in Claim 4, and a purge valve as recited in Claim 5, and an air pressure gauge as recited in Claim 11 for the spark gap housing. Czerlinski discloses a spark gap housing 10 with a charge valve 51 and purge valve 55, and an air pressure gauge 31. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Boksjo, Goodman, and Dibble with a charge valve, purge valve and air pressure gauge as taught by Czerlinski to maintain a controlled environment of inert gas in the housing for ionization of the inert gas to provide current flow through the gas tube. Claims 15 and 20 recite a step of filling the spark gap housing with the inert gas using a charge valve extending into the housing. Claim 16 recites a step of extending a purge valve into the housing, the purge valve operable to allow at least one of venting and removal of the inert gas from the housing. Regarding these recited method steps; one would necessarily perform these steps in the assembly of the apparatus rejected above.

7. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boksjo et al. (US 3,487,261) in view of Goodman (US 6,088,210) and Dibble et al. (US 6,070,568) and Czerlinski (US 4,520,249). Boksjo fails to disclose a charge valve as recited in Claim 9, and a purge valve as recited in Claim 10 for the spark gap housing. Czerlinski discloses a spark gap housing 10 with a charge valve 51 and purge valve 55. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Boksjo and Goodman with a charge valve and purge valve as

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taught by Czerlinski to maintain a controlled environment of inert gas in the housing for ionization of the inert gas to provide current flow through the gas tube.

***Response to Arguments***

8. Applicant's arguments filed on 12/06/2006 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LT  
1/08/2007



BRIAN SIRCUS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

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is removed while the electromagnet is energized (Column 2, lines 12-14). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Boksjo's apparatus and to use as a magnet protector as taught by Goodman to safely dissipate the stored magnetic charge in case of an accidental disconnect of an energized magnet (see Goodman, Column 2, lines 5-14).

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